

## Appendix B

# Aircraft Characteristics

### GENERAL

B-1. Basic information on weapon systems, air transportability, helicopter dimensions, and communications have been provided, in Tables B-1 through B-4, to assist in the planning of operations.

**Table B-1. Weapon Systems**

Aircraft Type ***	Hellfire or *TOW	Air-to-Air Stinger	2.75" (70mm) Rockets	.50 caliber machine gun (rounds)	20mm cannon (rounds)	30mm Chaingun (rounds)
AH-1 ****	8 TOW		76		750	
AH-64A**	16 Hellfire		76			1,200
AH-64D**	16 Hellfire/ Hellfire II	4	76			1,200
OH-58D** ****	4 Hellfire	4	14	500		
RANGE	<b>Hellfire</b> 8 km max <b>TOW</b> 3750m max	5+ km max	8 km max	2 km max	2 km max	4 km max
NOTES: *The AH-1 uses the TOW missile, as its armor engagement weapon, instead of the Hellfire missile. **Aircraft has a laser for target designation and an ATHS. ***Numbers in each column indicate the maximum load for each system. The total amount of ordnance carried will vary based on METT-T and selected weapon configuration. ****One weapon system per side for Hellfire and/orTOW, ATAS, and 2.75-inch rocket.						

**Table B-2. Air Transportability**

Aircraft Type	C-130		C-141		C-17		C-5	
	Rapid Deploy	High Density	Rapid Deploy	High Density	Rapid Deploy	High Density	Rapid Deploy	High Density
AH-1	1		3	4	4	6	7	12
AH-64	N/A		2**		4**		6***	
CH-47	N/A		N/A		N/A		2****	
OH-58A/C	2	3	4	6	7	7	10	13
OH-58D	2	3	4	6	7*	7	10	13
UH-1	1		2	4	4	6	6	11
UH-60	N/A		2**		4**		6***	
NOTES: *3 with MMS on, 4 with MMS removed. **Remove stabilator, fold blades (main and tail),fold pylon (UH-60 only), drop main rotor head, fairing steps and antennas. *** Remove stabilator and fold blades (main and tail). ****Remove forward and aft blades, aft pylon, and forward transmission package.								

**IMPORTANT:** High-density column represents significant aircraft disassembly, so as to reduce the aircraft to minimal size for transport.

**Table B-3. Helicopter Specifications**

<b>Aircraft Type</b>	<b>Height</b>	<b>Fuselage Length</b>	<b>Weight (pounds)</b>	<b>Rotor Diameter</b>	<b>Airspeed (knots)</b>	<b>Endurance (hours or KMs)</b>
AH-1	13'7.7" over main rotor	45'8" *Overall 53'1"	10,000 max 7,500 empty	44'	190 max 120 cruise	**Combat radius is 100 KM.
AH-64A	15'3" over main rotor	49'1" *Overall 57'8"	21,000 max 11,500 empty	48'	164 max 120 cruise	**Combat radius is 150 KM. Combat radius w/ 230-gallon tank is 300 KM.
AH-64D	16'1" over main rotor	49'1" *Overall 57'8"	23,000 max 12,000 empty	48'	176 max 120 cruise	**Combat radius is 150 KM. Combat radius w/ 230-gallon tank is 300 KM.
CH-47D	18'7.8" over aft pylon	50'9" *Overall 98'10.7"	50,000 max 24,000 empty	2 - 60'	170 max 130 cruise	2.5 w/o external fuel (225 KM) 4.0 w/external fuel (350 KM)
OH-58C	9' 7" over main rotor	32'2" *Overall 40'11.8"	3,200 max 2,400 empty	35'4"	120 max 100 cruise	2.0 normal 1.5 worst case
OH-58D	12'10.6" over main rotor	33'0.4" *Overall 41'2.4"	5,200 max 3,500 empty	35'	125 max 100 cruise	2.0 normal 1.5 worst case
UH-1	14'8.2" over tail rotor	41'5" *Overall 57'0.7"	9,500 max 7,400 empty	48'3.2"	124/112 max roof/nose 100 cruise	2.5 w/o auxiliary fuel 6.0 w/ auxiliary fuel
UH-60 A – UH-60A L – UH-60L	16'10" over tail rotor	50'7.5" *Overall 64'10"	A-20,250 max L-22,000 max 11,000 empty	53'8"	193 max 130 cruise	2.5 w/o external fuel (225 KM) 5.0 w/ external fuel (450 KM)

NOTES: \*The word "overall" in the length column refers to distance from the most forward tip of the forward facing rotor blade to the farthest aft portion of the aircraft (such as, the most aft tip of the rear facing rotor blade on a CH-47).  
 \*\*Endurance figures are based on an average weapons configuration and will vary, depending on specific weapons configurations and loads.

**Table B-4. Number and Type of Radios**

<b>AIRCRAFT TYPE</b>	<b>FM</b>	<b>VHF</b>	<b>UHF</b>	<b>HF</b>
AH-1	1	1	1	
AH-64A	** 1 (2)	** 1 (0)	1	
AH-64D	2	1	1	
CH-47D	*** 0, 1, 2	*** 2, 1, 0	1	1
OH-58C	2	1	1	
OH-58D	2	1	1	* 1
UH-1	2	1	1	
UH-60	2	1	1	
NOTES: *The HF listed above is not currently installed but the wiring and mounts exist. **Configuration is 2 FM and 0 VHF <b>OR</b> 1 FM and 1 VHF. ***Configuration is 2 FM and 0 VHF <b>OR</b> 1 FM and 1 VHF <b>OR</b> 0 FM and 2 VHF.				

**AH-1 COBRA**

B-2. The AH-1 Cobra is a single-engine, tandem-seat, two-bladed attack helicopter. Its crew consists of two rated aviators. The pilot occupies the rear cockpit and the copilot-gunner occupies the front cockpit. The AH-1 is essentially a daytime weapons platform due to the inability to fire and track the TOW missile at night. Some Cobras have been modified with a terminal night sight called C-NITE (Cobra night). This system allows the gunner to thermally track the TOW missile at night through the TSU. See FM 1-112 for a detailed explanation of the aircraft.

**AH-64A APACHE**

B-3. The AH-64A is a twin-engined, tandem-seat, four-bladed attack helicopter. With its crew of two rated aviators, the pilot occupies the rear cockpit and a copilot-gunner occupies the front cockpit. The aircraft has day, night, and limited adverse weather fighting capabilities. The aircraft is equipped with a LRF/D. The LRF/D is used to designate for the firing of a Hellfire missile and provides range to target information for the fire control system. See FM 1-112 for a detailed explanation of the aircraft.

**AH-64D LONGBOW APACHE**

B-4. The AH-64D is a variant of the AH-64A. The AH-64D is designed to provide increased effectiveness over the existing capabilities and greatly reduce the limitations of the AH-64A. The AH-64D has the following improvements: FCR, RF Hellfire (fire and forget) missile system, digital communications, glass cockpit with MFDs and other significant features. Day, night, and limited adverse weather fighting capabilities of the AH-64A are significantly enhanced in the AH-64D. The addition of the M299 Launcher and AGM-114L Longbow Hellfire II missile with fire-and-forget capability enhance combat effectiveness and survivability of the aircraft and crew. See FM 1-112 for a detailed explanation of the aircraft.

### **CH-47D CHINOOK**

B-5. The CH-47D is a twin-engine, tandem rotor helicopter designed for transportation of cargo, troops, and weapons during day, night, visual, and instrument conditions. The maximum single load that can be suspended as a tandem load from the forward and aft hooks is 25,000 pounds. Troop seating arrangements for up to 31 fully equipped ground troops or 24 litters is provided in the CH-47D. See FM 1-113 for a detailed explanation of the aircraft.

### **OH-58A/C KIOWA**

B-6. The OH-58A/C is a single-engine, single-rotor, two-bladed observation helicopter. The crew consists of the pilot, pilot and copilot, pilot and gunner, or pilot and observer.

### **OH-58D KIOWA WARRIOR**

B-7. The OH-58D is a single-engine, single-rotor, four-bladed armed reconnaissance helicopter. The crew consists of two rated aviators. The pilot occupies the right seat while the CPO occupies the left seat to operate the systems. See appendix C for a detailed discussion on the KW.

### **UH-1H IROQUOIS**

B-8. The UH-1H is a single-engine, single-rotor helicopter. Primary mission capability of the helicopter is air movement of supplies and personnel. Secondary missions include stability operations, support operations, air assault, and C<sup>2</sup> operations under day, night, visual, and instrument conditions. The aircraft has an external load capability of 4,000 pounds. The aircraft can carry up to 11 combat-loaded troops. See FM 1-113 for a detailed explanation of the aircraft.

### **UH-60A/L BLACK HAWK**

B-9. The UH-60A/L is a twin-engine, single-rotor helicopter. Primary mission capability of the helicopter is air assault and air movement. Secondary missions include stability operations, support operations, CSAR, C<sup>2</sup> platform, CASEVAC, and Air Volcano (mine setting) during day, night, visual, and instrument conditions. The UH-60A has an external load capability of 8,000 pounds and the UH-60L is 9,000 pounds. The aircraft can carry 11 troops with seats installed, 16 troops with seats removed and carrying rucksacks, and 20 troops with seats removed and not carrying rucksacks. See FM 1-113 for a detailed explanation of the aircraft.